Karnataka State Akkamahadevi Women's University, Vijayapura

EFFECT OF PLYOMETRIC TRAINING AND YOGIC PRACTICES ON DEVELOPMENT OF PHYSICAL, PHYSIOLOGICAL AND PSYCHOLOGICAL PARAMETERS AMONG HIGH SCHOOL GIRLS

The Proposal

Submitted For the Degree of

Doctor of Philosophy

In Physical Education

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2023

Introduction

All activities which are part of human behavior were subject to a long-term development. Let us take throwing, which is regarded a basic motor activity, as an example. In the deep past, throwing was necessary for feeding and defense. At present, throwing has lost its importance as one of the above mentioned activities but it is involved in different sports to a great extent (e.g. athletics, handball, baseball, etc.). The task of a prehistoric hunter was to hit the target precisely to get food. The aim of a present-day athlete is to throw the javelin as far as possible. The result of the activity in both examples can be considered a performance.

Performance is understood as an extent to which motor task is accomplished. With the prehistoric hunter, performance is evaluated dichotomically: hitting the target or missing and it is not restricted by any rules. In the case of the athlete, performance is evaluated following rules of the sports discipline which were set in advance, it is expressed by the length of the throw and is understood as a sports performance. An ability to achieve a given performance repeatedly is referred to as efficiency.

The aim of sports training is to achieve maximum individual or team efficiency in a selected sports discipline limited by rules.

Reaching maximum efficiency in any activity is not possible over a day. Efficiency is conditioned by several interrelated areas. Sports training focuses on

reaching maximum efficiency in motor abilities connected to a certain sports discipline. Supposed performance depends on motor ability and motor skill which are closely related to the sports discipline. Motor abilities can be described as relatively stable sets of inner genetic presuppositions needed to carry out locomotive activities. They include force, speed, endurance, coordination and flexibility. Motor abilities are manifested on the outside by sports skills. Sports skills are presuppositions needed for implementing performance in a selected sports discipline which is limited by rules. Such presuppositions are gained through motor learning. It, however, would not be possible to implement sports skills or develop locomotive abilities without motivation. Motivation is understood as an inner incentive to carry out certain activity. The final area needed for performance implementation is represented by tactical skills. Tactics means conducting a sports competition in a purposeful way.

The contents of sports training consists of individual key areas which are called components of sports training:

- Physical component is generally focused on developing motor abilities.
- Psychological component is focused on improving the athlete's personality.

Sports training is understood as a process of systematic development of each component in dependence on the duration of preparation which leads to achieving maximum efficiency within the selected sports discipline.

Plyometric training is a form of exercise that has gained popularity in recent years due to its effectiveness in improving athletic performance. It involves quick and explosive movements that help to improve speed, power, and agility.

Plyometric training is a type of exercise that involves explosive movements, such as jumping, hopping, and bounding. These exercises are designed to help athletes develop explosive power, speed, and agility. Plyometric training typically involves jumping onto and off of boxes, hopping over cones, and performing exercises like depth jumps and squat jumps.

Plyometric training involves short, intense bursts of activity that target the fast-twitch muscle fibers. These fibers are responsible for generating explosive power, which is why plyometric training is so effective for improving athletic performance.

This kind of training benefits any athlete but is beneficial for athletes who need to change direction quickly. Plyometrics are typically done as jumping exercises where the muscles are stretched as they contract. The benefits of plyometric training include increased muscle strength, improved coordination, and agility.

These exercises are very efficient because they work on explosive power and speed. They are also very safe when done correctly because they do not require any weights or other heavy equipment.

Plyometric training helps you build explosive power through quick, powerful movements. Plyometric training can help to improve our power output, which is essential for explosive movements like jumping and sprinting. By training our fast-twitch muscle fibers, plyometric exercises can help generate more power in less time, which can lead to better performance on the field. Plyometric training can help to improve speed by improving explosive power. By training fast-twitch muscle fibers, plyometric exercises can help generate more power with each stride, which can lead to faster sprinting times and better agility on the field.

Plyometric training can also help to enhance our agility. The quick and explosive movements in plyometric exercises can help to improve our footwork and balance, which can make more effective athlete on the field. Plyometric training can also help to build muscle. These exercises target the fast-twitch muscle fibers, which are responsible for building muscle mass. By incorporating plyometric exercises into your training program, you can build lean muscle mass, which can lead to better athletic performance. Plyometric training can also help to improve your cardiovascular health. These exercises are high-intensity, which means they can get your heart rate up and improve your cardiovascular endurance over time.

Plyometrics are an essential part of a workout routine for athletes. Plyometric exercises help to build muscle, strength, and power. In addition, they are a great way to develop your quickness and the ability to generate force quickly.

Yoga is an ancient Indian way of life, which includes changes in mental attitude, diet, and the practice of specific techniques such as yoga asanas (postures), breathing practices (pranayamas), and meditation to attain the highest level of consciousness.

Yoga is a mind and body practice that can build strength and flexibility. It may also help manage pain and reduce stress. Various styles of yoga combine physical postures, breathing techniques, and meditation. Yoga is an ancient practice that may have originated in India. It involves movement, meditation, and breathing techniques to promote mental and physical well-being.

Yoga is most commonly associated with the physical practice of asana, a series of postures often weaved together in styles such as Vinyasa Flow or Ashtanga. Asana practice is generally intended to build strength and stamina, to improve flexibility, coordination and balance, and to relax the body. However, this provides only one small aspect of the tradition of yoga as a whole.

Statement of the Problem

The purpose of the study is to assess the Effect of Plyometric Training and Yogic Practices on Development of Physical, Physiological and Psychological Parameters among High School Girls.

Objectives of the Study

- To find the effect of Plyometric Training and Specific Yogic Practices on the development of Physical Fitness variables of High School Girl Students.
- To find the effect of Plyometric Training and Specific Yogic Practices on the development of Physiological variables of High School Girl Students.
- To find the effect of Plyometric Training and Specific Yogic Practices on the development of Psychological variables of High School Girl Students.

Delimitation

1. This study is delimited to female students from the Government High Schools in Bangalore.
2. The subjects for the study is delimited to the 120 High School Girls only.
3. The age group of the subjects ranged from 13 to 16 years.
4. The study delimited to the following independent variables.

   Systolic Blood Pressure, Diastolic Blood Pressure, Anxiety, Aggression and Body Mass Index.
5. The study delimited to the following depended variables.

Zig-Zag Run for Agility, 50 Mts Dash for Speed, Pushups for Muscular Endurance, 600 Mts run/Walk for Cardio Respiratory Endurance and Sit and Reach for Felxibilty.

Limitations

1. The Physical, Physiological and Psychological tests will be conducted on different days.
2. The training will be conducted for 5 days a week for 12 weeks.
3. The students participation in other routine activities will not be considered as it is beyond the control of the investigator.
4. Life style of the subjects affecting their nutritional status is beyond the control of the investigator.
5. No specific motivation techniques will be used to encourage the subjects to attain their maximum performance during testing.
6. Climate condition and environmental factors is beyond the control of the investigator.
7. The students are from different economic status which is considered as a limitation for this study.
8. The responses of the subjects to the statements in the questionnaire will depend upon various factors such as understanding of the statements, seriousness and sincerity of the subjects.

Hypothesis

- It is hypothesized that Plyometric Training and Yogic Exercises will help in the development of Physical Fitness variables of High School Girl Students.
- It is hypothesized that Plyometric Training and Yogic Exercises will help in the development of Physiological variables of High School Girl Students.
- It is hypothesized that Plyometric Training and Yogic Exercises will help in the development of Psychological variables of High School Girl Students.
- The study may help to recommend to adapt Specific Plyometric Training along with Yogic Practices to young school going Girls for better Performance.

Review of Literature

P. Ganesh Kumar et.al (2012) conducted a study on "Effect of Plyometric Training with Yogic Practices on Selected Skills Performance Variables of Intercollegiate Female Hockey Players" in which, forty inter-collegiate female hockey players were selected as subjects who were the participants of Bharathiar University tournaments. They were divided into two equal groups. Each group consists of 20 subjects. Group - I was underwent to Plyometric with yogic practices training, Group – II was the control group. The age of subjects ranged from 18-25 years. The variables selected were dribbling control, shooting accuracy and overall playing ability. The selected variables were assessed by using standardized tests. The data was collected before and after 12 weeks of training. The collected data was analyzed by using t-test. The level of significance was fixed at 0.05. The findings of the study showed that Plyometric with yogic practices training had significant effect on selected skills performance variables when compared to control group.

Dr. C.Suresh and Pravin Raj conducted a study on Impact of Yogic Practices and Resistance Training on Flexibility and Speed in College Students. Sixty (N=60) college students from VTM College of Arts and Science in Arunmanai, Tamilnadu, were chosen randomly. The participants were split into three classes of twenty (n=20) each: yogic practice (n=20), resistance exercise (n=20), and control (n=20). The participants were between the ages of 18 and 21. Selected dependent variables namely such as flexibility and speed. Flexibility

tested by sit and reach test unit of measurement in centimeters. Speed tested by 50-meter dash unit of measurement in in seconds. The results were interpreted using descriptive statistics and Covariance Analysis (ANCOVA) and Scheffe's test was used. The 0.05 degree of significance was used in all situations since three groups were compared. It was found that yogic practice enhanced physical health variables such as flexibility in college students significantly. It was found that yogic practice greatly improved physical health variables in college students, such as speed. It was found that yogic practice enhanced physical health variables in college students, such as agility.

C Gayatri and G Sarah Sarojini (2022) conducted a study to find out the Effect of Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices on Physical Fitness Variables among Women Cricket Players. The investigator randomly selected 90 women Cricket Players from different colleges in Tirupati and the age of players were between 17 and 21 years. They were divided into three groups with thirty subjects each (n = 30) at random again consisting thirty subjects in each group and they were randomly assigned as Experimental group I Plyometric Training with Yogic Practices, Experimental group II Plyometric Training without Yogic Practices and control group (CG). Speed and Agility has selected as criterion variable of this study. The experimental groups underwent Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices for eight weeks, three days per week and a session on each day. The difference between the Pre-test and post-test

means were subjected to statistical treatment using ANCOVA, In all cases 0.05 level was fixed to test the hypothesis of the study, which was considered as an appropriate. It was concluded from the result of the study that there was a significant improvement ($p \leq 0.05$) due to Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices on Speed and Agility as compared to control group.

Dr. Praveen Kumar Sehrawat and Dr. Deepak Raghav (2022) Conducted a study to find out the effect of polymeric training with yogic practices on selected physiological variables among volleyball players. It was hypothesized that there would be significant differences on selected physiological variables due to the effect of plyometric training with yogic practices among volleyball players. For the study 30 male volleyball players from Meerut College, Meerut and Shri Shaligram Sharma Smarak (PG) College Rasna, Meerut India were selected at random and their age ranged from 18 to 25 years. Pretest – posttest random group design which consisted of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent plyometric training with yogic practices and Group 'B' has not undergone any training. The data was collected before and after six weeks of training. The data was analyzed by applying dependent 't" test. The level of significance was set at 0.05. The experimental group showed better improvement on systolic blood pressure,

diastolic blood pressure and resting pulse rate among volleyball players than the control group.

V.Vijayalakshmi and Dr.T.Jayabal (2013) Conducted a study to find out the effects of plyometric training with yogic practices on selected physical and physiological variables among adolescent boys. To examine 30 adolescent boys were selected from SVVMH School, Coimbatore. The age group ranges from 13 to 18 years. Subjects were equally divided into two equal groups namely experimental group and control group. Plyometric training with yogic practices was given to experimental group. Control group did not participate in any special training programme. The Plyometric training with yogic practices was scheduled for twelve weeks prior and after the training for the subjects pre – test and post – test was conducted on agility and breath hold time were tested. The data collected from the subjects were statistically analyzed with 't' ratio to find out significant difference among experimental group and control group. The analysis of the data indicates that plyometric training with yogic practices improved agility and breath hold time.

Anbukumaran and Dr. V Jeyaveerapandian conducted a study to compare the effects of plyometric training, yogic exercises and games specific training on selected physical fitness variables of men volleyball players. Sixty college men volleyball players were selected as subjects. In that, 15players each selected from SACS MAVMM Engineering College, Vaigai College of Engineering, Latha Mathavan Engineering College and Velammal College of Engineering and

Technology, Madurai, Tamil Nadu, India and their age ranged from 17 to 23 years. The subjects were divided into four equal groups of fifteen men volleyball players each. Group I acted as Experimental Group I (Plyometric training), Group II acted as Experimental Group II (Yogic exercises), and Group III acted as Experimental Group III (Game-specific training) Group IV acted as and Control Group. The duration of experimental period was 12 weeks. The pre-test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences, whenever the 'F' ratio for adjusted test was found to be significant; Scheffe's post hoc test was used. In all cases 0.05 level of confidence was fixed to test hypotheses. In comparing the effect of experimental groups on reaction time, visual accommodation and depth perception from the obtained f-ratios, it was observed that all the groups produced similar effect.

Nagaraja Y and Gajanana Prabhu B. (2017) conducted a study to analyze the effect of eight weeks land based and sand based plyometric training on selected physical and physiological variables among inter collegiate level sportspersons pursuing their graduation under Kuvempu University. Subjects for the study were thirty (30) intercollegiate level sportspersons pursuing their graduation in Shivamogga. Their age ranged between 20 to 25 years. Purposive random sampling was observed in order to ascertain minimum levels of fitness of the sportspersons. Fifteen students each were placed randomly into plyometric training groups namely Land (N=15) and Sand (N=15) surfaces. In order to

examine the efficacy of plyometric training on different surfaces following tests were conducted on all the subjects under the study. The subjects underwent these tests twice during the course of study i.e pre-test and post-test. The variables selected for the study were speed, dynamic strength, lower body explosiveness, agility, body composition and resting heart rate. Suitable standard tests were selected for assessing attributes. Paired sample 't' test was used as a statistical technique apart from descriptive statistics. Within the limitations of the present investigation it is concluded that the speed aspect of physical fitness can be significantly enhanced through sand based plyometric training as compared to land based plyometric training.

Dr. Dibakar Debnath and N. Ezhilmaran, conducted a study determine the effect of plyometric training on the selected motor fitness variables among collegiate handball players. For this purpose, thirty men players were selected from Faculty of General & Adapted Physical Education and Yoga, Ramakrishna Mission Vivekananda University, Coimbatore. The age group of the subjects ranged from 21 to 25 years. They were selected by random sampling method and divided into 2 groups namely Group –A Experimental group and Group B control group and each group consisting of 15 subjects. The experimental group underwent plyometric Training for a period of six weeks and was tested before and after the training. Standardized tests were used to test the selected variables. The data were analyzed statistically by using dependent 't' test in order to bring out the significant differences between the pre test and post test scores. After six

weeks of Plyometric Training the experimental group showed significant improvement in the selected Motor fitness variables namely leg explosive power and cardio vascular endurance.

Dr. Baljit Singh Sekhon and Dr. D. Maniazhagu, conducted a study to know the effects of low intensity plyometric training combined with aerobic training on flexibility. Thirty subjects were randomly assigned into three equal groups. They were assigned to experimental group-1, experimental group-2 and control group. The experimental group-1 (n=10, LI-PT) and group-2 (n=10, LI-PT-AT) received low intensity plyometric training and low intensity plyometric training combined with aerobic training respectively for eight weeks, three times a week. Flexibility was measured by sit and reach test and performance of flexibility was recorded in centimetres. After 8 weeks, the low intensity plyometric training and low intensity plyometric training combined with aerobic training demonstrated significant improvement by 0.05% on flexibility rather than control group. The nature of flexibility highly developed in the influences of low intensity plyometric training and low intensity plyometric training combined with aerobic training than the control group.

Siyad B. R. and Dr. V. A. Manickam conducted a study to determine the Cloistered and Coalesce effect of Power Yoga and Plyometric Training on selected Physical variable among Tribal Taekwondo Players. To achieve this purpose, sixty (N=60) girls Tribal Taekwondo players studying various schools in Kerala. Their age ranged from 14 to 16 years. The subjects were assigned at

random into four groups of fifteen in each (n=15). Group-I underwent Power Yoga, Group-II underwent Plyometric Training, Group-III underwent Coalesce Power Yoga and Plyometric Training and Group –IV was as the Control group. Speed was selected as dependent variable and it was assessed by 50 Meters Sprint test. The data collected from the four groups prior to and immediately after the training programme on the selected criterion variables were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's test was followed, as a post hoc test to determine which of the paired mean differences was significant. In all the cases .05 level of confidence was fixed. The experimental groups namely, power yoga, plyometric training and coalesce power yoga and plyometric training had significantly improved in speed. Coalesce power yoga and plyometric training group was found to better than power yoga group and plyometric training group in improving speed.

Mr. P. Barath and Dr. R. Venkatachalapathy, conducted a study was to find the effect of weight training and yoga practice and combination of weight training, plyometric training and yoga practices on leg strength and vital capacity. For this purpose, forty-five male students from Kruti Institute of Engineering and Technology, Raipur, Uttar Pradesh, in the age group of 17 – 23 years were selected. They were divided into three equal groups (n = 15), each group consisted of fifteen subjects, in which group – I underwent weight training and yoga practice, group – II underwent combination of weight training, plyometric

training and yoga practice and group – III acted as control group who did not participate in any special training. The training period for this study was three days in a week for twelve weeks. Prior to and after the training period the subjects were tested for leg strength and vital capacity. Leg strength was assessed by administering sit and reach test and vital capacity was assessed by using expirograph. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the experimental groups and control group on selected criterion variables separately. Since there were three groups involved in this study the Scheffė S test was used as pos-hoc test. It was concluded from the result of the study that the weight training and yoga practice group and combination of weight training, plyometric training and yoga practice group has positively altered the criterion variables, such as, leg strength and vital capacity. The result of the study also showed that there was no significant difference occurred between the experimental groups, such as, weight training and yoga practice group and combination of weight training, plyometric training and yoga practice group.

Dr. A. Suman Kumar (et.al) (2022) analyzed the combined effect of plyometric schooling and yogic practices on velocity and persistence amongst SVEC and SVDC soccer players to gain the motive of the prevailing take a look at forty-five Football game have been decided on as a topic of randomly and their age random from 18 to twenty-five years the challenge are divided into 3 same groups the take a look at turned into formulated as a real random group design

including a pre take a look at as a put up take a look at the student (N=45) have been randomly assigned to a few groups of fifteen topics each. The group were assigned as experimental group-1 experimental group-2 and experimental group-3 in unequal manner. The 3 groups are participated with inside the schooling eight week to discover of the schooling packages. The 3 groups were statically analyzed with the aid of using paired ‘f-ratio’ to take a look at the end result of the take a look at famous that there has been a massive development with inside the experimental groups on decided on variables whilst compared to the all 3 groups after he eight weeks of plyometric schooling and yogic practice.

Dr. V. A. Manickam and S. Vigneshwaran (2018) Conducted a study to determine the isolated and combined yogic practices and plyometric training on muscular strength among school level Volleyball players. To achieve the purpose of the study, sixty (N=60) boys school Volleyball players in Sivagangai District, Tamilnadu, were selected randomly as subjects during the year 2015-2016. They were divided randomly into four groups of fifteen each i.e., (n=15) Group-I underwent Yogic Practices, Group-II underwent Plyometric Training, Group-III underwent Combined Yogic Practices and Plyometric Training and Group-IV acted as Control. The Experimental groups underwent respective training period for three days per week for twelve weeks. The dependent variable selected for this study was Muscular Strength. All the subjects were tested prior to and immediately after the experimental period on the selected dependent variables. The data collected from the four groups prior to and post experimentation were

statistically analyzed by analysis of covariance (ANCOVA). Since four groups were involved, whenever the obtained 'F' ratio for adjusted post test means was found to be significant, the Scheffe's test was applied as post hoc test to determine the paired mean differences. The experimental groups had significant increase on Muscular Strength when comparing to the control group

S.Thiruvangadam and Dr R Mohanakrishnan (2022) conducted a study to find out the combined effect of yogic practice and interval training on speed and stress among armed reserved police of Cuddalore district. To achieve the purpose of this study 60 armed police men were randomly selected from cuddalore district, Tamil Nadu, India and their age ranged between 30 and 40 years. All the subjects were divided into four equal groups with 15 subjects each. Group-A underwent Yogic Practice, Group-B underwent Interval Training, Group -C underwent combined training for a period of eight weeks and group-D acted as control who did not participate in any special training other than their regular routine. The variables such as speed and stress were selected as dependent variables. Speed was assessed by 50 mts and stress was assessed by Everly and Girdano's Questionnaires. Pre and post-test random group design was used for this study. The data were collected before and after the training period of eight weeks and the data collected were statically analysed by 'ANOVA' test, which was used to find out the significant improvement on selected variables from the base line to post. The result of the study combined effect of yogic practice and

interval training produced that there was a significant improvement in the speed and stress among armed reserved police of Cuddalore district.

A Yuvaraj (2018) conducted a study to find the Effects of Yogic Practices on selected body composition variables among intellectually challenged persons for this study twenty (N=20) male mild intellectually challenged persons were randomly selected as a subject from Paradise special school, Muttukadu in Chennai, India. Their Age ranged between 14-18 years. They were randomly divided in to two equal groups of ten (n=10) subjects each namely experimental group and Control group. Experimental group underwent to yogic practice for the period of twelve weeks and no training are given to the control group. Body composition variables such as Body Mass Index (BMI) and percentage body fat (%) were selected as dependent variables and independent variables were only yoga. The data was collected before and after the experimental treatment period. Analysis of Covariance (ANCOVA) statistical technique was used in this study. It was concluded that Body Mass Index (BMI) and percent body fat (%) level of experimental group were significantly altered due to the influence of twelve weeks practices of yoga when compare with control group of mild intellectually challenged persons.

Prahlad Singh Patel (et.al) (2020) Conducted a study to discover the Effect of plyometric training programme with yogic practices on speed and agility of adolescence volleyball players. 45 adolescent volleyball male players with the age ranged from fourteen to twenty years. All the subjects residing at own home

and during training were imparted within the Sports and Youth Welfare Department, Academy, Narsinghpur, M.P. For this study two Motor Fitness Components namely speed and agility were used. This study was conducted to determine possible cause and effect relationship of 08 weeks Plyometric training and yogic practice on volleyball players. To analyze data, descriptive statistics was used. Further to check the effectiveness of each training program between pre and post test in both experimental group paired t- test was used. To adjust for difference in the initial means and test the adjusted posttest means for significant differences, the analysis of covariance (ANCOVA) was used (Broota, 1989) and the hypothesis was tested at 0.05 level of significance. The findings of the study in relation to speed and agility, subject showed in a significant difference between pre and posttest in plyometric training and plyometric& yogic asana training group. There was significant difference among different training group in relation to speed and agility. Further, In case of post means difference plyometric & yogic exercise training group and control group was found insignificant difference, in relation to speed and plyometric training and plyometric& yogic exercise training group was found insignificant difference, in relation to agility.

S Sivasankar and Dr. V Vallimurugan (et.al) (2019) Conducted a study to find out the effect of yogic practices and physical exercises on selected physical and psychological variables among Information Technology professional. To achieve this purpose of the study, only forty five (n=45) male subjects were selected from Information Technology companies in Chennai. The subjects of the

study were selected at random. The age of the subjects were ranged between 30 to 40 years. The selected subjects were divided into three equal groups of fifteen subjects each, such as experimental groups I & II and control group. This study consisted of four equal groups of fifteen subjects each. Group-I (n=15) underwent yogic practices, group-II (n=15) underwent physical exercise, group-III (n=15) acted as control group. The experimental groups were trained for three alternative days in a week for twelve weeks with their specific training. The collected data from the three groups prior to and immediately after the experimental treatments on selected dependent variables were statistically analyzed by using the statistical technique of analysis of covariance (ANCOVA), whenever they obtained 'F' ratio for the adjusted posttest means was found to be significant, the Scheffe's post hoc test was applied to determine the paired mean differences, if any, was used. The results of the study revealed that there was a significant improvement on selected physical and psychological variables due to yogic practices and physical exercises groups as compared to control group.

Abhilash Solomon and P. Gopinathan (2014) conducted a study to find out the effect of Yoga practices on Physical, physiological and Psychological variables of school students. For this purpose, 38 subjects from the residential school studying higher secondary class were selected as subjects and they were divided in to two equal groups with 19 each as experimental and control group. Both the group undergone usual physical training in the morning forty-five minutes general fitness and evening one and half an hour in their choice in

playing different games and apart from the routine activity the experimental group underwent selected yogasana practice daily morning 60- minute included 10 minutes of warm-up and the control group not given any special training. The training period for this study was 8 weeks in a schedule of 5 days in a week. The pre and post test were conducted prior and after the training programme on the selected physical fitness variables of 50-meter dash, standing broad jump, sit ups and sit and reach, physiological variables of vital capacity, resting heart rate, breath holding time, respiratory rate, systolic pressure and diastolic pressure and psychological variables of mental health, self-confidence and anxiety. The mean, standard deviation and t-value were assessed both experimental and control group separately and thereby significant level were analyzed. The significant level was fixed at 0.05 levels. The result of the study revealed that the experimental group shown the significant improvement in all the selected variables where as in control only 50 m dash and vital capacity having significant improvement and all the remaining variables are not having any significant improvement. The results revealed the effectiveness of yogasanas in physical fitness, physiological systems and psychological efficiency of school students

Dr.T.P.Yokesh (2019) conducted a study to find out the effect of plyometric training with and without yogic practices on balance among handball players. To achieve the purpose the study, forty-five handball players were selected from Alagappa University College of Physical Education, Karaikudi were randomly selected as subjects. As per the records, their age ranged from 18

to 25 years. For this study the true randomized experimental group design has been employed with three groups namely plyometric training with yogic exercises group, plyometric training without yogic exercises group and control group with 15 subjects each. Group I and II participated their respective treatments for a period of twelve weeks and no training were given to the control group. The three groups were statistically analysed by using analysis of covariance (ANCOVA). In case of significance of mean difference was observed on the criterion measure, to find out which pair of groups is high among the others, as a post – hoc test, the Scheffe's test was applied. The result of the study reveals that there was a significant improvement on the balance when compared to the control group and plyometric training without yogic practices after the completion of twelve weeks of plyometric training programme with yogic practices.

Methodology

In this chapter, selection of subjects, selection of variables, selection of tools and statistical technique will be discussed. The purpose of this study is to assess the "The purpose of the study is to assess the Effect of Plyometric Training and Yogic Practices on Development of Physical, Physiological and Psychological Parameters among High School Girls.

Selection of Subjects:

To achieve this purpose 120 High School Girls will be selected by random sampling technique, as subject's age group range between 13 to 16 years.

The below table show the variables, Test/Tools and the unit of measurement of selected Physical, Physiological and Psychological Variables that will be used in this study.

S.No	Name of the Variable	Name of the Test	Unit of Measures
Physical Fitness Parameters			
1	**Agility**	Zig Zag Run	In Seconds
2	**Speed**	50 Meter Dash	In Seconds
3	**Cardio Respiratory Endurance**	600 Mts Run/Walk	In Seconds
4	**Muscular Endurance**	Push-Ups	In Numbers
5	**Flexibility**	Sit & Reach Test	In Cms

Physiological Parameters			
6	**Systolic Blood Pressure**	Sphygmomanometer	In mmHg
7	**Diastolic Blood Pressure**	**Sphygmomanometer**	**In mmHg**
Physical Parameters			
8	**BMI**	Height, Weight and Age As per World Health Organisation (WHO) Guidelines	
Psychological Parameters			
9	Anxiety, Aggression		
Appropriate Statistical procedure would be followed to analyse the data			

Statistical Technique and Analysis

1. To test the hypothesis, discriminate analysis in SPSS statistical package.
2. T-test would be used to determine if there is a significant difference in the means of two groups (Experimental and Control Group) for every particular variable.
3. Descriptive statistics would be used to describe the variables, such as mean, standard deviation frequency distributions, charts and graphical representation.
4. Buss Perry Aggression Questionnaire (BPAQ) would be used to assess Aggression
5. GAD-7 Anxiety Questionnaire would be used to assess Annxiety.

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